



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,720	09/22/2003	Steffen Sonnekalb	J&R-1126	9696
24131 7590 08/16/2007 LERNER GREENBERG STEMER LLP P O BOX 2480 HOLLYWOOD, FL 33022-2480			EXAMINER PAN, DANIEL H	
			ART UNIT 2183	PAPER NUMBER
			MAIL DATE 08/16/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/667,720	Applicant(s) SONNEKALB, STEFFEN	
	Examiner Daniel Pan	Art Unit 2183	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. Claims 1-9 are presented for examination.
2. Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection.
3. Chan et al. (6,163,837) is used to show the stop pipeline stages without creating any conditions as newly amended claim (see user inserted NOP into the pipelines set forth below in this action)

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-9 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The reasons are given below.
5. As to claim 1, claim 1 recites a configuration (see preamble). A configuration is an abstract idea. Although claim body recites program-controlled unit configured for executing pipeline instructions, it is not sure whether this program controlled unit is a part of the configuration which is an abstract idea itself or a part of the configuration which is a hardware processor? It is not sure whether this "configuration" is a machine, a method, or the combination? In the specification applicant taught program-controlled units are microprocessors (see specification page 1). However, applicant never taught "a configuration" is a microprocessor. Microprocessors or the program – controlled units could be described by an abstract idea, and not being implemented as a machine or the like. No microprocessor is being reflected into the claim. It seems that "A configuration comprising " is a preemption of abstract idea, not directed to practical

Art Unit: 2183

application. Therefore, it raised a doubt as what applicant is seeing is directed to statutory subject matter or not.

6. The evidence shows that, the stipulation of which of the pipeline stage(s) should be stopped (claim 1, lines 11-13) is an intended result. No useful, tangible, and concrete final result can be found.

7. As to claims 2,4,5-9, although claims recite the program-controlled units is configured for specifying, blocking, beginning, or treating, the configuration itself is an abstract idea, and the specifying, blocking, beginning, or treating are intended results, no final result which is useful, tangible, and concrete (see MPEP 2100, (2) Practical Application That Produces a Useful, Concrete, and Tangible Result).

8. As to claim 3, claim 3 recites "can stipulate", which is an intended result.

9. Claims 1 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chan et al. (6,163,837) in view of Douglas et al. (6,609,193).

10. As to claim 1, Chan taught a system including :

a) a program-controlled unit (compiler) including an instruction execution pipeline having a plurality of pipeline stages (figs.6,7, col.5, lines 36-67, col.6, lines 1-7) configured for executing pipeline instructions instructing program-controlled unit to stop an individual one of said plurality of pipeline stages, more than one of said plurality of pipeline stages, or all of said plurality of pipeline stages without creating any conditions for which a pipeline stage was stopped (see NOP inserted into the pipeline stage by user in col.7, lines 44-55) ; and the pipeline instructions stipulating which particular one of the plurality of pipeline stages should be stopped (for "stipulating", see user

inserted a NOP in pipeline in col.7, lines 44-55, see also the programmer and compilers expected to know the latencies in col;.6, lines 54-67).

11. Chan did not specifically show to stop a plurality of stages or all stages as claimed. However, Douglas taught to stop an individual one of a plurality of pipeline stages, more than one of a plurality of pipeline stages (see clocks stalled), or all of said plurality of pipeline stages (see stalled clock in fig.8, see all clocks stalled, see fig.7 for instructions for stalling, see also the instructions for the stalling in the pipeline stages in col.11; lines 11-67, col.12, lines 1-22). It would have been obvious to one of ordinary skill in the art to use Douglas in Chan for stopping a plurality of stages and all stages as claimed because the use of Douglas in Chan for stopping a plurality of stages or all stages because the use of Douglas could provide Chan the ability to halt particular stages of the pipeline based on the user predefined sequence, and therefore, enhancing the interface control of the pipeline stages by user, and one of ordinary skill in the art should be able to recognize the applicability for stopping the pipelines stages at any number of stages because Chan already taught the insertion of NOP into the pipeline stage by user, and since no specific distinctions and details have been recited among the stopping of one pipeline stage, more than one and all pipelines stages, it was recognizable by one of ordinary skill in the art to realize that the user would have more flexibility in designating any number of stages for stopping in general as defined by user.

12. As to claim 2, Douglas also specified the length of time of the stage to be stopped (see time 1 in col.11, lines 10-13, see time 2 in col.12, lines 1-2).

13. As to claims 3,4, 5,6, Douglas also configured for setting a time for respective one of the plurality of pipeline stages at a particular time after executing (or passed through the pipeline) an instruction that instructs stopping (see the particular clock x for staling the pipe stage based on the given command in fig.7).

14. As to claim 7, Douglas also instructed stopping, or other instructions can stipulate a time for beginning to stop a respective one the plurality of pipeline stages (see the stalls by respective commands for each pipe stage in co1.8, lines 50-67, col.9, lines 1-13).

15. As to claim 8, Douglas also configured for blocking execution of the instructions, which instruct stopping (see blocking of stall in col .9, lines 50-58, co1.10, lines 1-6, co1.13, lines 38-42).

16. As to claim 9, Douglas also configured for treating the instructions, which instruct stopping, as unknown instructions when execution of the instructions, which instruct stopping, is not enabled (see the thread ID of the instruction was not considered in co1.10, lines 1-6, see the thread ID 0 blocking the instruction in co1.13, lines 38-42).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Barton et al. (6,233,389) is cited for the teaching of instructing to stop pipeline stages without condition (see the stopping of part of pipeline at user's whim in co1.10, lines 1-5).

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Pan whose telephone number is 571 272 4172. The examiner can normally be reached on M-F from 8:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chan, can be reached on 571 272 4162. The fax phone number for the organization where this application or proceeding is assigned is 703 306 5404.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

21 Century Strategic Plan

DANIEL H. PAN
PRIMARY EXAMINER
GROUP